EMA
Content Availability
~~Metadata~~<u>Data</u>
(Avails)
Showing changes from v1.6b

CONTENTS

REVISION HISTORY

Version	Date	Description
1.0	January 3, 2013	Original Version
1.4	December 1, 2013	Updated to sync with EMA Avails Excel template v1.4. Added closed caption annotation for United States.
1.6	September 29, 2014	Update to • Support television and complex asset structures • Allow the specification of any number of terms • Increase flexibility of terms than can specified, including holdbacks • Provide identifier linkage to Media Manifest • Incorporate field changes from Excel Avails v1.5 and v1.6 • Clarifications, corrections and editorial improvements
1.6B	October 15, 2014	Added CompanyDisplayCredit
2.0	June 12, 2015	Improved miniseries support Improved handling of open start/end dates and rolling time zones. Added Season and series status (cancellation) Simplified identifiers Added provisions for shared entitlement systems (e.g., DMA, UltraViolet) Added digital signature option

1   INTRODUCTION

The Entertainment Merchant's Association (EMA) has defined the means to delivery Content Availability (Avails) data. 'Avails' is an industry term for business information regarding the availability of assets to be offered. It includes information such as region of available, times of available and business terms. This document was developed by the EMA Digital Council with the objective of standardizing the metadata communication from content providers to digital retailers.

This document defines EMA Avails.

The document describes encoding for Avails data in both spreadsheet form and in XML form. Although spreadsheets may serve an interim purpose, migration to XML is encouraged.

EMA Avails Metadata builds upon Media Entertainment Core (MEC) Metadata, and also Common Metadata developed by Motion Picture Laboratories, EMA, DEG and others.

1.1   Document Organization

This document is organized as follows:

1. Introduction—Provides background, scope and conventions

2. Avails—The definition of Avails data. This includes encoding information that applies to both spreadsheets and XML; and the XML definition.

3. Rules for Spreadsheet Encoding – Information on using Section 2 definitions within spreadsheets. Also, information on mapping between spreadsheets and XML.

1.2   Document Notation and Conventions

1.2.1 XML Conventions

XML is used extensively in this document to describe data. It does not necessarily imply that actual data exchanged will be in XML. For example, JSON may be used equivalently.

This document uses tables to define XML structure. These tables may combine multiple elements and attributes in a single table. Although this does not align with schema structure, it is much more readable and hence easier to review and to implement.

Although the tables are less exact than XSD, the tables should not conflict with the schema. Such contradictions should be noted as errors and corrected.

1.2.1.1 Naming Conventions

This section describes naming conventions for Common Metadata XML attributes, element and other named entities. The conventions are as follows:

- Names use initial caps, as in InitialCaps.

- Elements begin with a capital letter, as in InitialCapitalElement.

- Attributes begin with a lowercase letter, as in initiaLowercaseAttribute.

- XML structures are formatted as Courier New, such as `md:rightstoken`

- Names of both simple and complex types are followed with "-type"

1.2.1.2 Structure of Element Table

Each section begins with an information introduction. For example, "The Bin Element describes the unique case information assigned to the notice."

This is followed by a table with the following structure.

The headings are

- Element—the name of the element or type

- Attribute—the name of the attribute

- Definition—a descriptive definition. The definition may define conditions of usage or other constraints

- Value—the format of the attribute or element. Value may be an XML type (e.g., "string") or a reference to another element description (e.g., "See Bar Element"). Annotations for limits or enumerations may be included (e.g.," int [0..100]" to indicate an XML xs:int type with an accepted range from 1 to 100 inclusively).

- Card—cardinality of the element. If blank, then it is 1. Other typical values are 0..1 (optional), 1..n and 0..n.

The first row of the table after the header is the element being defined. This is immediately followed by attributes of this element, if any. Subsequent rows are child elements and their attributes. All child elements (i.e., those that are direct descendents) are included in the table. Simple child elements may be fully defined here (e.g., "Title", " ", "Title of work", "xs:string"), or described fully elsewhere ("POC", " ", "Person to contact in case there is a problem", "md:ContactInfo-type"). In this example, if POC was to be defined by a complex type defined as md:ContactInfo-type. Attributes immediately follow the containing element.

Accompanying the table is as much normative explanation as appropriate to fully define the element, and potentially examples for clarity. Examples and other informative descriptive text may follow. XML examples are included toward the end of the document and the referenced web sites.

1.2.2 General Notes

All required elements and attributes must be included.

When enumerations are provided in the form 'enumeration', the quotation marks ('') should not be included.

1.3 Normative References

[CM] TR-META-CM MovieLabs Common Metadata, version 2.~~1~~3,
http://www.movielabs.com/md/md

[CR] TR-META-CM, MovieLabs Common Metadata Ratings, most current version,
http://www.movielabs.com/md/ratings

[Manifest] TR-META-MMM, MovieLabs Common Media Manifest Metadata, version 1.4.
http://www.movielabs.com/md/manifest

[MECMD] DEG-EMA Media Entertainment Core Metadata, version 2.~~1~~3,
http://www.movielabs.com/md/mec

[RFC2141] R. Moats, *RFC 2141, URN Syntax*, May 1997, http://www.ietf.org/rfc/rfc2141.txt

[RFC3629] Yergeau, F., et al, *RFC 3629, UTF-8, a transformation format of ISO 10646*,
November, 2003. http://www.ietf.org/rfc/rfc3629.txt

[RFC3986] Berners-Lee, T., et al, RFC 3986, Uniform Resource Identifier (URI): Generic
Syntax, January 2005, http://www.ietf.org/rfc/rfc3986.txt

[RFC5646] Philips, A, et al, *RFC 5646, Tags for Identifying Languages*, IETF, September, 2009.
http://www.ietf.org/rfc/rfc5646.txt

[IANA-LANG] IANA Language Subtag Registry. http://www.iana.org/assignments/language-
subtag-registry

[ISO3166-1] Codes for the representation of names of countries and their subdivisions -- Part 1:
Country codes, 2007.

[ISO3166-2] ISO 3166-2:2007Codes for the representation of names of countries and their
subdivisions -- Part 2: Country subdivision code

[ISO4217] Currency shall be encoded using ISO 4217 Alphabetic Code.
http://www.iso.org/iso/currency_codes_list-1

[ISO8601] ISO 8601:2000 Second Edition, *Representation of dates and times, second edition*,
2000-12-15.

[CEA766] ANSI/CEA-766-C, U.S. and Canadian Rating Region Tables (RRT) and Content
Advisory Descriptors for Transport of Content Advisory Information Using ATSC
Program and System Information Protocol (PSIP). April 2008~~.~~.[XMLC1.1] *Canonical
XML Version 1.1,* W3C Recommendation 2 May 2008, http://www.w3.org/TR/xml-
c14n11/

[XMLDSIG] *XML Signature Syntax and Processing (Second Edition),*
http://www.w3.org/TR/xml-c14n11/, June 2008, http://www.w3.org/TR/2008/REC-
xmldsig-core-20080610/

1.4 Informative References

[RFC4647] Philips, A., et al, *RFC 4647, Matching of Language Tags*, September 2006. http://www.ietf.org/rfc/rfc4647.txt

European Broadcast Union, Tech 3295 – P_META Metadata Library, http://www.ebu.ch/en/technical/metadata/specifications/notes_on_tech3295.php

1.5 XML Namespaces

This document refers to the following XML namespaces:

- md: Common Metadata corresponding with Common Metadata.

- mdmec: Media Entertainment Core Metadata. Note that mdmec: references md: schemas

- avails: includes Avails data. Note that avails: references md: and mdmec: schemas

1.6 Identifiers

Identifiers must be universally unique. Recommended identifier schemes may be found in Common Metadata and in UltraViolet Content Metadata.

1.7 Status

This specification is completed and ready for pilot implementation. Although tested, we anticipate that additional implementation experience will yield recommendation for changes. Implementers should anticipate one or more revisions. Reasonable measures will be taken to ensure changes are backwards compatible.

1.8 Date and Time encoding

Dates and times are sometimes expressed as an absolute time (2:00AM PST) and sometimes relative to the local time zone (12:00AM local time). In the case of Avail start and end, the former would reflect a worldwide start/end time and the latter would represent start/end times rolling with the local time (e.g., 12:00AM EDT in the EDT time zone, 12:00AM CDT in the CDT time zone, etc.).

Absolute times are indicated with the use of a time zone. Even though the time is specified for a given region, it is a fixed time worldwide. When specifying times worldwide, it is recommended that UTC be used (encoded with 'Z'). For example,

```
<start>2015-03-12T04:25:00Z</start>    (preferred format with UTC)
<end>2015-04-24T17:00:00-08:00</end>  (less preferred format)
```

Times relative to a time zone should be expressed without a time zone. For example,

```
<start>2015-03-12T04:25:00</start>
<end>2015-04-24T17:00:00</end>
```

In some instances, in lieu of a date or time, a condition can be specified (e.g., StartCondition and EndCondition). Conditions specify the status of the date or time without necessarily defining a date or time. Encoding for condition elements are as follows

- 'Open' – The date is not currently known.
  - If used in the context of a start date, the date is considered unknown and no date match will be satisfied.
  - If used in the context of an end date, the end date is considered infinitely in the future. Any date after a valid start date would be considered a match.

- 'Immediate' – Date applies immediately, as if date were right now.
  - If in the context of start date, action can be taken immediately
  - If in the context of end date, action should stop as soon as possible.

A title can be availed before start date is known by setting StartCondition='Open'. This is not a valid avail in the sense that the title cannot be offered until an actual date is provided. An example of this usage is providing an avail for an episode before it is aired (i.e., air date is not known).If a title is availed, but the end date of the avail is not known, EndCondition='Open' is used. An example of this usage is a pre-order avail when street date is not known.

2 AVAIL INFORMATION

The top level element for Avails are `Avail` and `AvailList`. The top-level XML type for Avails are `Avail-type` and `AvailList-type`.

2.1 Avail List

An Avail List contains on or more Avials.

Element	Attribute	Definition	Value	Card.
AvailList		Element for an Avail List	avails:AvailList-type	

Element	Attribute	Definition	Value	Card.
AvailList-type				
Avail		An Avail	avails:Avail-type	1..n

2.2 Avail

The Avail element is defined as follows:

Element	Attribute	Definition	Value	Card.
Avail		Element continuing a single Avail	avail:Avail-type	

The Avail-type complex type is defined as follows:

Element	Attribute	Definition	Value
Avail-type			
	AvailID	An identifier unique to the Licensor that identifies this Avail. AvailID is used to match Avails for Update and Delete operations. It can also be used by respective parties to refer to the Avail.	md:id-type

ALID		Logical Asset Identifier. The ALID identifies the set of content contained within the Avail.	md:AssetLogicalID-type
Disposition		Information about the Avails message such as whether it is a new Avail or if it replaces a previous Avail message.	avails:AvailDisposition-type
Licensor		The entity issuing the Avail	mdmec:Publisher-type
ServiceProvider		Entity that will deliver assets associated with the Avail. This is typically a post-production organization.	mdmec:Publisher-type
AvailType		Defines the asset structure of this avail. (see below)	xs:string
ShortDescription		A short description of the Avail. This is optional but strongly recommended.	xs:string
Asset		Each instance defines an asset subject to the Avail instructions	avails:AvailAsset-type
Transaction		Each instance includes transaction information regarding the Avail	avails:AvailTransaction-type
CoreMetadata		Media Entertainment Core (MEC) if available.	mdmec:CoreMetadata-type

~~ContentManagement~~SharedEntitlement		~~Advisory information to support content management.~~Information about Shared Entitlement systems such as Disney Movies Anywhere and UltraViolet. One instance per system.	avails:~~AvailContentManagement~~AvailSharedEntitlement-type
ExceptionsFlag		In indicator from the studio to the retailer that his avail should be reviewed in some manner before being published by the retailer. If present, it shall be set to 'true'. If absent, it is assumed to be 'false'	xs:boolean

AvailType defines the asset structure of the avail. This is how the studio differentiates between offering a single title (e.g., an episode) from multiple titles (e.g., a season). This type also support additional content such as a movie offered with extras.

AvailType shall have one of the following values. Note that WorkType is defined in Section 2.2.2.

- 'single' – A single non-episodic asset. This is used for a WorkType such as 'Movie'.
  - There shall be a single Avail/Asset element with an Avail/Asset/Metadata element.
  - Asset/WorkType corresponds with work types associated with single assets (i.e., work types such as 'movie' or 'short', but not work types such as 'series' or 'Collection').
- 'episode' – A single episodic asset (i.e., an episode).
  - There shall be a single Avail/Asset element with an Avail/Asset/EpisodeMetadata element.
  - Asset/WorkType= 'Episode'.
- 'season' – A single season consisting of multiple episodes. A season may be availed even though the number of episodes is unknown (e.g., prior to airing).

- There shall be a single Avail/Asset element with an Avail/Asset/SeasonMetadata element. Note that with a 'season' asset, metadata is not provided for individual episodes.

  - Asset/WorkType= 'Season'.

- 'series' – A single ~~season~~series consisting of two or more seasons. If only one season is offered, AvailType='season' or AvailType='miniseries' should be used ~~.~~.

  - There shall be a single Avail/Asset element with an Avail/Asset/SeriesMetadata element.

  - Asset/WorkType= 'Series'.

- 'miniseries' – A single series consisting of two or more episodes. If only one episode is offered, AvailType='episode' should be used. Note that if the title was expected to have multiple seasons (i.e, either cancelled after one or more anticipated), 'season' should be used.

  - There shall be a single Avail/Asset element with an Avail/Asset/SeriesMetadata element.

  - Asset/WorkType= 'Series'.

  - Asset/SeriesMetadata/NumberOfSeasons, if included, shall be interpreted as number of episodes.

- 'collection' – Any collection of two or more assets.

  - One Avail/Asset element shall exist for each asset. If there is a main title (e.g., feature film) it should be listed first and other assets (e.g., extras) should follow.

  - Asset element shall be constructed as defined above for single, episodes, seasons and series. For example, if an extra is a 'Supplemental', encoding would be in accordance with 'single'.

2.2.1 AvailDisposition-type

Disposition instructs the recipient had to process the Avail in the context of previously sent Avails. The *scope* of the disposition is the combination ALID, Licensor and regions. 'Full Extract' creates Avails, of if they exist replaces all Avails with the same ALID, Licensor and regions. Note that if Avails in a particular region and the Full Extract does not cover that region, then Avails will not be changed for that region—another Full Extra is required to update or a Delete to remove it.

Avails

Element	Attribute	Definition	Value	Card.
AvailDisposition-type				
EntryType		Indication of whether this Avail is new, update or deletion.	xs:string	
IssueDate		Date this Avail was issued. If necessary, recipients can use IssueDate to reconstruct the order of issuance. Although this may be xs:gYear only or xs:date, it is strongly recommended that the xs:dateTime form be used.	md:YearDateOrTime-type	0..1
~~ReplacesAvailID~~		~~An AvailID in an Avail previously sent. Used to match for purposes of updating or deleting.~~	~~md:id-type~~	~~(optional choice)~~
~~ReplacesEntryDate~~		~~An EntryDate in an Avail previously sent. Used to match for purposes of updating or deleting.~~	~~md:YearDateOrTime-type~~	~~(optional choice)~~
<any>		Any other element	any ##other	0..n

EntryType shall have one of the following values:

- ~~"Create" – Creates a new Avail.~~
- "Full Delete" – Deletes all Avails with the ~~matching Avail. See note below on matching.~~ same scope.

~~The following values for EntryType are defined for future use but are not allowed at~~ "Full Extract" – Avails in this ~~time:~~

- ~~"Update" – Updates a matching Avail. See note below on matching. This Avail~~ instance will replace ~~the previous Avail in its entirety.~~
- ~~"Full Extract" – All avail entries provided for a title's version within a territory should overwrite all previous avail entries for that version within that territory.~~
- ~~"Other" – The recipient should evaluate the current Avail against existing Avails and determine whether this Avail is new or an update. It is recommended that "Update" be used instead of "Other".~~

~~An Avail matches an earlier Avail if the new Avail's ReplacesAvailID matches the earlier Avail's AvailID, or the new Avail's ReplacesEntryDate matches the earlier Avail's EntryDate.~~

~~If EntryType is absent, the following is used to match~~

If Transaction/@AvailID is present

- If an avail associated with AvailID is present at the Retailer

    o If EntryType is "Delete", the avail is deleted

    o Otherwise, EntryType is ignored and the avail is updated

- If an avail associatedall other Avails with AvailID is not present at the Retailer, and EntryType is not "Delete", an avail is createdthe same scope.

If Transaction/@AvailID is not present, the retailer attempts to match the avail based on ProductID, ContentID, Region and StoreLanguage. Any overlap (e.g., overlapping regions or languages) constitutes a match.

- If a match exists, action is taken based on the value of EntryType as follows

    o Delete: remove matching avail

    o Update: update matching avail

    o Other: update matching avail

    o \<absent\>: update matching avail

- If a match does not exist, action is taken based on the value of EntryType

    o Delete: no action avail

    o Update: create avail

    o Other: create avail

    o \<absent\>: create avail

AvailID must be unique within a given Licensor. It also must be unique to the title, region and language in question. If there is any overlap (e.g., a record for worldwide and another record for US), matching could fail. Note that EntryType is intended to refer to a set of avails, rather than individual items so one set of records can replace another set of records (e.g., a single worldwide avail can be updated to multiple regional avails).

2.2.2 AvailAsset-type

Element	Attribute	Definition	Value	Card.
AvailAsset-type				
	contentID	Asset Identifier. This should be an EIDR.	md:ContentID-type	
WorkType		Work type as enumerated in Common Metadata, and repeated below.	xs:string	

TitleInternalAlias WorkTypeDetail		Title used by involved parties to refer to this content.WorkTypeDetail as enumerated in Common Metadata	xs:string	0..1
Metadata		Metadata describing Asset	avails:AvailUnitMetadata-type	Choice (see Avail-type)
EpisodeMetadata		Metadata to describe an instance of an episode.	avails:AvailEpisodeMetadata-type	
SeasonMetadata		Metadata to describe a season of episodes.	avails:AvailSeasonMetadata-type	
SeriesMetadata		Additional metadata describing series information, such as seasons and series. This shall only be included if the asset is part of a series (e.g., an episode)	avails:AvailSeriesMetadata-type	
<any>		Used for asset description extensions	any ##other	0..n

WorkType shall be enumerated to one of the following (categories are to support the definition, but are not included in the enumeration).

Music related:

- 'Album' A collection of songs
- 'Song'
- 'Music Video' Music Video, not 'Performance'
- 'Ring Tone'
- 'Other Music'

Film related:

- 'Movie' A full length movie regardless of distribution (e.g., theatrical, TV, direct to disc, etc.) and content (e.g., includes documentaries).
- 'Short' a film of length shorter than would be considered a feature film.

TV, web and mobile related:

- 'Series' a show that might span one or more seasons or might be a miniseries.
- 'Season' a season of a Series. It will contain one more episodes.
- 'Episode' an episodes of a season or miniseries. A pilot is also an episode. If episode is a 'webisode', 'mobisode' or other specialized sequence, it should be noted in Keywords.

- 'Non-episodic Show' – TV or other show that is non-episodic; for example, sports and news.

- 'Promotion' – promotional material associated with media. This includes teasers, trailers, electronic press kits and other materials. Promotion is a special case of 'Ad'.

- 'Ad' – any form of advertisement including TV commercials, informercials, public service announcements and promotions not covered by 'Promotion'. This does not include movie trailers and teasers even though they might be aired as a TV commercial.

Other:

- 'Excerpt' – An asset that consists primarily of portion or portions of another work or works; for example, something having the 'isclipof' or 'iscompositeof' relationship.

- 'Supplemental' – Material designed to supplement another work. For example, and extra associated with a Movie for a DVD.

- 'Collection' – A collection of assets not falling into another category. For example, a collection of movies.

- 'Franchise' – A collection or combination of other types, for example, a franchise might include multiple TV shows, or TV shows and movies.

2.2.2.1 AvailMetadata-type

This type is used for single asset work types. It is also the base for other metadata objects.

Element	Attribute	Definition	Value	Card.
AvailMetadata-type				
TitileDisplayUnlimited		Display title, no length limit. Same as TitleDisplayUnliminted in Common Metadata.	xs:string	0..1
TitleInternalAlias		Title used by involved parties to refer to this content.	xs:string	
ProductIDEditEIDR-S		An identifier mutually agreed upon by sender and recipient. ProductID must be unique within a licensor. It is preferable that it be globally unique, such an EIDR.Edit ('level 2') EIDR identifier using short syntax (i.e., no '10.5240/' prefix)	xs:stringmd:id-type	0..n1
TitleEIDR-S		Title Abstraction ('level 1') EIDR identifier using short syntax (i.e., no '10.5240/' prefix)	md:id-type	0..1

AltIdentifier		Other identifiers referring to the same asset. Same as AltIdentifier in CommonMetadata.	md:ContentIdentifier-type	0..n
	scope	Indicates the scope of the AltIdentifier	xs:string	0..1
VersionDescription		A brief description of the version.	xs:string	0..1
ReleaseDate		Release date of title in earliest territory. This is highly recommended to disambiguate different works with the same title (e.g., Footloose 1984 vs. 2011). Can express year, year and month or release date.	Union(xs:gYear, xs:gYearMonth, xs:date)	0..1
RunLength		Total run time. Same as RunLength in Common Metadata.	xs:duration	0..1
ReleaseHistory		History of release such as air dates or DVD release information. Defined in Common Metadata, 4.1.1.	md:ReleaseHistory-type	0..n
USACaptionsExemptionReason		Caption information for United States distribution. If captions are not required this element should be populated with a value defined below.	xs:positiveInteger	0..1
Ratings		Content Ratings. Ratings from should comply with Common Ratings [CR].	md:ContentRatings-type	
EncodeID		EIDR identifying encoding (manifestation)	md:id-type	0..1
LocalizationOffering		Distinguishes products that are offered based on whether the offering is localized with dubbed audio track or a language subtitle track. Titles must have these components when offered to the consumer.	xs:string	0..1
<any>		Any other element	any ##other	0..n

The @scope attribute is encoded as follows

- 'Title' – equivalent to an Abstraction (title) level EIDR ('level 1')
- 'Edit' – equivalent to a Performance (edit) level EIDR ('level 2')
- 'Manifestation' – equivalent to an EIDR manifestation ('level 3')

USACaptions is required for Avails whose Territory is the United States.

CaptionExemptionReason shall hold one of the following values

- '1' – This content has never aired on television in the U.S.
- '2' – This content has only aired on television in the U.S. without captions.

- '3' – This content has not aired on U.S. television with captions since Sept. 30, 2012

- '4' – This content does not consist of full-length video programming.

- '5' – This content does not fall within a category of online programming that currently requires captions under FCC regulations (49 C.F.R. § 79.4(b)).

- '6' – The FCC and/or U.S. Congress has granted an exemption from captioning requirements for this content.

LocalizationOffering shall, if present, hold one of the following values:

- 'sub' – offering must include subtitles

- 'dub' – offering must include dubbed audio

- 'subdub' – offering must include both subtitles and dubbed audio.

- 'any' – offering can have any combination of subtitles and dubbed audio (whatever is available)

'any' is the default and is assumed if this term is not included.

2.2.2.2 AvailUnitMetadata-type

This metadata object is used for content that is a standalone title (e.g., a movie).

Element	Attribute	Definition	Value	Card.
AvailUnitMetadata-type		Episode metadata. Base object is extended.	Avail:AvailMetadata-type (by extension)	
CompanyDisplayCredit		Information about grouping content into storefronts based on organizations such as studio or broadcaster. Equivalent to ComapnyDisplayCredits in Media Entertainment Core (MEC).	md:CompanyCredits-type	0..n

2.2.2.3 AvailEpisodeMetadata-type

This metadata object is used when the Avail's asset is an episode. This applies to any episodic material, such as TV episodes and mini-series episodes.

Note that the episode optionally includes the season which in turn optionally includes the series. This provides a complete definition of the episode.

Element	Attribute	Definition	Value	Card.
AvailEpisodeMetadata-type		Episode metadata. Base object is extended.	~~A~~avail:AvailMetadata-type (by extension)	
EpisodeNumber		Episode number as defined in Common Metadata. Parties should agree upon which numbering scheme to use.	md:ContentSequenceInfo-type	
SeasonMetadata		Metadata for the season in which the episode exists	~~A~~avail:AvailSeasonMetadata-type	(choice)
SeriesMetadata		Metadata for a series in which the episode exists. This only used for episodes that not part of season; for example, mini-series.	avail:AvailSeriesMetadata-type	

2.2.2.4 AvailSeasonMetadata-type

This metadata object is used for a single season.

Element	Attribute	Definition	Value	Card.
AvailSeasonMetadata-type				
SeasonContentID		The identifier for this season, preferably an EIDR.	md:id-type	
~~ProductID~~SeasonEIDR-S		~~An identifier mutually agreed upon by sender and recipient. ProductID must be unique within a licensor. It is preferable that it be globally unique, such an EIDR.~~Season Abstraction ('level 1') EIDR identifier using short syntax (i.e., no '10.5240/' prefix)	md:id-type~~xs:string~~	0..~~n~~1
TitleEIDR-S		Title's Abstraction ('level 1') EIDR identifier using short syntax (i.e., no '10.5240/' prefix)	md:id-type	0..1
SeasonTitleDisplayUnlimited		Title for season. Same as Common Metadata TitleDisplayUnlimited for WorkType 'Season.	xs:string	

LocalSeasonName		Local season title, if applicable. Same as Common Metadata TitleDisplayUnlimited for WorkType 'Season.	xs:string	0..n
	language	Language for local series title	xs:language	
SeasonNumber		Season number as defined in Common Metadata. Parties should agree upon which numbering scheme to use.	md:ContentSequenceInfo-type	
VersionDescription		A brief description of the version.	xs:string	0..1
ReleaseDate		Release date of title in earliest territory. This is highly recommended to disambiguate different works with the same title (e.g., Footloose 1984 vs. 2011). Can express year, year and month or release date.	Union(xs:gYear, xs:gYearMonth, xs:date)	0..1
SeasonAltIdentifier		Other identifiers for the season.	md:ContentIdentifier-type	0..n
	scope	Indicates the scope of the AltIdentifier. See Section 2.2.2.1 for encoding.	xs:string	0..1
NumberOfEpisodes		Number of episodes in this season.	xs:positiveInteger	0..1
	estimate	Indicates the number of episodes is estimated, particularly when a season is offered prior to the season being completely aired. If present, it must be 'true'. If 'true' then NumberOfEpisodes is an estimate.	xs:boolean	0..1
SeasonStatus		Indicates the current status of the season (see below). If absent, season is assumed to either completed or in the process of being distributed/aired.	xs:string	0..1
SeriesMetadata		Metadata about the series that includes this season.	Avails:AvailSeriesMetadata-type	0..1

<any>		Any other element	any ##other	0..n

For the purposes of counting episodes, an episode is a single video. This could be a single episode, double-episode or any other packaging. Bonus material should be handled as separate asset and not counted as an episode.

SeasonStatus is encoded as following

- 'Partial – Series was terminated mid-season. If still airing new episodes, NumberOfEpisodes is the anticipated number of episodes that will be completed.

2.2.2.5 AvailSeriesMetadata-type

This metadata object is used for a full series (multiple episodes).

Element	Attribute	Definition	Value	Card.
AvailSeriesMetadata-type				
SeriesContentID		Identifier for Series. Preferably an EIDR.	md:id-type	
~~ProductID~~SeriesEIDR-S		~~An identifier mutually agreed upon by sender and recipient. ProductID must be unique within a licensor. It is preferable that it be globally unique, such an EIDR.~~Series Abstraction ('level 1') EIDR identifier using short syntax (i.e., no '10.5240/' prefix)	~~xs:string~~md:id-type	0..~~n~~1
TitleEIDR-S		Title's Abstraction ('level 1') EIDR identifier using short syntax (i.e., no '10.5240/' prefix)	md:id-type	0..1
SeriesTitleDisplayUnlimited		Title for series in language mutually agreed upon by sender and receiver. Same as Core Metadata TitleInternalAlias	xs:string	
LocalSeriesTitle		Local series title, if applicable. Same as Common Metadata TitleDisplayUnlimited for WorkType 'Series'	xs:string	0..n
	language	Language for local series title	xs:language	
VersionDescription		A brief description of the version.	xs:string	0..1

ReleaseDate		Release date of title in earliest territory. This is highly recommended to disambiguate different works with the same title (e.g., Footloose 1984 vs. 2011). Can express year, year and month or release date.	Union(xs:gYear, xs:gYearMonth, xs:date)	0..1
SeriesAltIdentifier		Other identifiers for the series.	md:ContentIdentifier-type	0..n
	scope	Indicates the scope of the AltIdentifier. See Section 2.2.2.1 for encoding.	xs:string	0..1
NumberOfSeasons		Number of seasons in this series. If series is a miniseries, then this is interpreted as number of episodes.	xs:positiveInteger	0..1
SeriesStatus		Indicates the current status of the series (see below). If absent, 'Pending' is assumed.	xs:string	0..1
CompanyDisplayCredit		Information about grouping content into storefronts based on organizations such as studio or broadcaster. Equivalent to ComapnyDisplayCredits in Media Entertainment Core (MEC).	md:CompanyCredits-type	0..n
<any>		Any other element	any ##other	0..n

SeriesStatus is encoded as following

- 'Concluded – Series is complete or will be at the end of the current season. This includes cancelled series.
- 'Continuing' – The series has been taken up for a new season.
- 'Pending' – The decision to conclude or continue a series has not been announced.

2.2.3 AvailTrans-type

AvailTrans-type defines the business terms associated with the Avail.

Element	Attribute	Definition	Value	Card.
AvailTrans-type				

	AvailIDTransactionID	AvailTransaction Identifier Mmust be unique to Avail window/entrywithin AvailLIst. It should be globally unique.	md:id-type	
LicenseType		Type of transaction. See below.	xs:string	
Description		A free-form description of the transaction.	xs:string	
Locale		Region or regions where transaction applies. Default is worldwide. Note that if both Locale and LocaleExcluded are absent, default is worldwide.	md:Region-type	0..n
LocaleExcluded		Region or regions where transaction does not apply. Default is nowhere, and Locale takes precedence.	md:Region-type	0..n
Start		Start of terms. If Start and ContStart areis absent, terms begin immediately. See Section 1.8.	xs:dateTime	(choice)0..1
StartCondition		Non-date condition for start. For example, "Open". See Section 1.8.	xs:string	
End		End of terms. See Section 1.8End of terms. If End and CondEnd are absent, terms continue indefinitely. This equivalent to 'Open' in the spreadsheet..	xs:dateTime	(choice)0..1
EndCondition		Non-date condition for start. For example, "Open". See Section 1.8.	xs:string	
StoreLanguage		Language or languages to which transaction applies. If absent, then all languages is assumed.	xs:language	0..n
LicenseRightsDescription		Description of License or Rights granted. See below.	xs:string	
FormatProfile		Indicates the format profile covered by the transaction. This typically refers to HD, SD or 3D.	xs:string	
ContractID		An identifier referencing any contract information relevant to this avail entry between the studio and retailer.	xs:string	0..1
Terms		Terms described in pre-defined values.	avails:AvailTerms-type	0..n
ExperienceCondition		Used in conjunction with Media Manifest, ExperienceCondition is the value used to match	xs:string	0..1

		@condition in manifest:ALIDExperienceMap-type. See [Manifest], Section 9.2.		
OtherInstructions		Any other instructions. Free text.	xs:string	0..1

LicenseType should have one of the following values, although additional values may be used by agreement between sender and receiver:

- 'EST' (Electronic Sell Through)

- 'VOD' (Video on Demand) – Download or streaming based on individual transactions (e.g., payment per use).

- 'SVOD' (Subscription VOD) – Streaming on a subscription service

Note that any of these models can be paid or free.

LicenseRightsDescription should have one of the following values:

- 'New Release' – New release

- 'Library' – Catalog title

- 'Mega-Library' – High value library

- 'Priority Library' – Library content that must be processed with high priority.

- 'DD-Theatrical' – EST, VOD or Subscription availability, Day and Date withTheatricalwith Theatrical

- 'Pre-Theatrical' – EST, VOD or Subscription availability prior to theatrical availability

- 'DD-DVD'–Day and Date DVD

- 'Early EST' – EST prior to DVD availability

- 'Preorder EST' – preorder EST prior to DVD availability (order, but not download or play)

- 'Early VOD' – VOD prior to DVD availability, also Preorder VOD

- 'Preorder VOD' – preorder VOD prior to DVD availability (order, but not download or play)

- 'DTV' – Direct to Video. I newly release feature that was not theatrically released.

- 'Next Day TV' – Content that is typically published day after initial broadcast date.

- 'Season Only' – Content only available with season purchase.

- • 'Free' – Content offered at no cost. Terms must be consistent with a free offering.

FomatProfile should have one of the following values

- • 'HD' – High Definition

- • 'SD' – Standard Definition

- • '3D' – 3D, non-specific of resolution

- • '3DHD' – 3D High Definition

- • '3DSD' – 3D Standard Definition

- • 'HFR' – HD High Frame Rate

- • '3DHFR' – 3D High Frame Rate

- • '4K' – 4K (4096x2160) format or 4xHD (3840x2160)

- • '3D4K' – 3D 4K

2.2.3.1 AvailTerms-type

Terms allows arbitrary business terms to be specified.

The precise interpretation is subject to the mutual agreement of parties involved, although guidance is provided within.

Each term is a name/value pair with the name expressed as termName and the value expressed as one of Money, Event, Duration or text depending on the data contained within the term. If data cannot be otherwise expressed, the any##other element can be used.

Element	Attribute	Definition	Value	Card.
AvailTerms-type				
	termName	Identifies the term. Enumeration is below. termName is case insensitive (i.e., case shall be ignored).	xs:string	
Money		Used when termName refers to a term expressed in terms of money.	md:Money-type	(choice)
Event		Used when termName refers to a term expressed in terms of a date, or date and time. See Section 1.8.	xs:union(xs:date, xs:dateTime)	
Duration		Used when termName refers to a term expressed in terms of a time duration.	xs:duration	

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Text		Used when a term can be expressed in text and it is not one of the other term types.	xs:string	
URI		Used for URIs, including identifiers.	xs:anyURI	
Language		Used for language.	xs:language	
ID		Any identifier	md:id-type	
YearDateTime		Year, date or date+time. For time-only use Time.	md:YearDateOrTime	
Time		Time. May include time zone.	xs:time	
<any>		Any other element. Used when a term cannot practically be expressed with one of the other element choices.	any ##other	

The Term specified is indicated by termName with the following conditions:

termName	Interpretation	Element used
Tier	Pricing Tier	Text
SRP	Suggested Retail Price	Money
WSP	Wholesale Price	Money
EpisodeWSP	Episode Wholesale Price	Money
SeasonWSP	Season Wholesale Price	Money
Category	Price Category	Text
AnnounceDate	Date when the retailer is permitted to announce the availability start date of the title within the available territory. If expressed as a date, the time is assumed to be 12:01AM in the availability territory.	Event
PreorderStart	Date when preorder sales may begin	Event
PreorderFulfillDate	Date that a pre-order video can be released to a consumer for viewing.	Event
RentalDuration'	Duration of rental period in hours	Duration
WatchDuration'	How long user has to complete viewing once started, in hours	Duration
FixedEndDate	Fixed date when VOD rentals end, regardless of when purchased.	Event

HoldbackScope	Scope of holdback. Defined values include "All", "Sale", "Rental", "Download", "Stream", "License". If absent an any other holdback term exists, then "All" is assumed.	Text
HoldbackAsset	Identifier of asset that is the subject of a holdback. If absent, all assets are assumed.	URI
HoldbackAssetType	Type of asset subject to the holdback. This is used specifically to holdback video, audio or subtitle tracks. Values include "Audio", "Video", "Subtitle". If absent, all types are assumed.	Text
HoldbackLanguage	Language that is held back (one instance per language). Cannot be used with HoldbackExclusionLanguage. If absent, all languages are assumed.	Language
HoldbackExclusionLanguage	All languages except those listed in the union of all instances are held back. Cannot be used with HoldbackLanguage. If absent, no languages are assumed.	Language
LocalizationOffering	Distinguishes products that are offered based on whether the offering is localized with dubbed audio track or a language subtitle track. Valid values are 'sub' which means the offering includes subtitles; and 'dub' means offering includes dubbed audio. If product contains both, this should not be included. If product contains one or the other, but is not offered based on that distinction, this should not be included.	Text
Promotion	Asset is availed against the content identified in the identifier. Nominal usage is to reference any Content against which promotional material will play (e.g., pre-roll trailer). Note that Manifest TimedEvent can provide additional information when to use this promotion.	ID
SharedEntitlementEcosystem	The ecosystem for a shared entitlementt (Avail/SharedEntitlement). Must be used with Shared Entitlement-related term such as SharedEntitlementEndDate.	Text
SharedEntitlementEndDate	The date after which a shared entitlement (Avail/SharedEntitlement) is no longer valid. Must be used with SharedEntitlementEcosystem.	YearDateTime
SharedEntitlementDisposition	If "Add", Shared Entitlement is to be added to the SharedEntitlementEcosystem. If "Delete", Shared Entitlement is to be removed if present.	Text

If value is post-tax, then the term "-PostTax" should be appended. For example, if Episode WSP is expressed post-tax it would be "EpisodeWSP-PostTax". Otherwise, pre-tax pricing is assumed.

Money is defined in Common Metadata [CM]. Note that Currency as expressed in ISO 4217 Currency Alphabetic Code. For example, 'USD" for US Dollars. If absent, then local currency is assumed. ISO4217 typically allows two or three digits after the decimal. However, Value in this element may have as many decimal places as necessary.

2.2.4 ~~AvailContentManagement~~AvailSharedEntitlement-type

~~The AvailContentManagement~~ This type ~~provides~~contains information ~~useful~~needed to ~~managing content. It is not strictly part of the Avail, but it can provide information useful to the delivery process.~~

~~Structurally,~~associate this ~~is very open-ended; essentially structured name/value pairs~~Avail with ~~Disposition being the name object~~shared entitlement systems such Disney Movies Anywhere (DMA) and UltraViolet.

Element	Attribute	Definition	Value	Card.
~~AvailContentManagement~~AvailSharedEntitlement-type				
~~Disposition~~	ecosystem	~~Information about this Avail. There may be more than one Disposition.~~Shared entitlement system.	xs:string	
~~RelatedAvailID~~		~~Reference to other Avails. Context depends on Disposition.~~	~~md:id-type~~	~~0..1~~
~~Comments~~EcosystemID		~~Free-form text relating to content management.~~Identifier used in the system	xs:string	~~0..~~1..n
~~RelatedMediaManifestID~~		~~Reference to a Media Manifest that contains asset information for this Avail.~~	~~xs:string~~	~~0..1~~
~~<any>~~		~~Any other information (in XML).~~	~~any##other~~	~~0..n~~

Ecosystem is encoded as follows:

- 'DMA' – Disney Movies Anywhere
- 'UVVU' – UltraViolet

3   DIGITALLY SIGNED AVAILS

To support the signing of avails to avoid tampering and also for non-repudiation, a signing mechanism is provided. For example, this mechanism provides a mechanism to know that an Avail delivered in an email message is truly from the expected source and has not been modified in transit.

3.1   Signed Container (AvailListSigned)

An element AvailListSigned, defined as AvailListSigned-type, contains an AvailList and a Signature element.

Element	Attribute	Definition	Value
AvailListSigned-type			
Message		Avail List	avail:AvailList-type
Signature		xmldsig Signature. See "Signed XML" below. (optional)	ds:SignatureType

3.2   Signed XML

For message-level authentication, the general process is that the sender generates unsigned messages (based on the appropriate specification for the message), generates a digital signature for that message, and then packages the message with the signature. This package is then sent to the recipient. The signed message contains enough information to validate the sender of the message, and includes both the unsigned message as well as the digital signature of the unsigned message XMLDSIG Signature.

XML Digital Signatures can be used to sign and validate messages across any delivery structure. These shall be in conformance with [XMLDSIG]. Note that later versions may be adopted as defined here: http://www.w3.org/TR/xmldsig-core/.

The following constraints shall apply when generating digital signatures:

- For CanonicalizationMethod
    o   Algorithm=http://www.w3.org/2006/12/xml-c14n11#WithComments
- For SignatureMethod,
    o   Algorithm=http://www.w3.org/2000/09/xmldsig#rsa-sha1
- For DigestMethod,
    o   Algorithm=http://www.w3.org/2000/09/xmldsig#sha1

A sample XML segment containing a digital signature is shown below.

```
<?xml version="1.0" encoding="UTF-8"?>
<AvailListSigned xmlns="http://www.movielabs.com/schema/avails/v1.6c/avails"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
```

```
xmlns:md="http://www.movielabs.com/schema/md/v2.3/md"
xmlns:mdmec="http://www.movielabs.com/schema/mdmec/v2.3"
xsi:schemaLocation="http://www.movielabs.com/schema/avails/v1.6c/avails avails-v1.6c-
draft-20150315.xsd">
<AvailList>
    . . .
</AvailList>
<ds:Signature>
    <ds:SignedInfo>
        <ds:CanonicalizationMethod Algorithm="http://www.w3.org/2006/12/xml-
c14n11#WithComments"/>
        <ds:SignatureMethod Algorithm="http://www.w3.org/2000/09/xmldsig#rsa-sha1"/>
        <ds:Reference URI="#envelope">
            <Transforms>
                <Transform Algorithm="http://www.w3.org/2001/10/xml-exc-c14n#"/>
            </Transforms>
            <ds:DigestMethod Algorithm="http://www.w3.org/2001/10/xmldsig#sha1"/>
            <ds:DigestValue>6hpmccmjxQmAI143OhQfIWpkryw=</ds:DigestValue>
        </ds:Reference>
    </ds:SignedInfo>
    <ds:SignatureValue>UjBsR09EbGhjZ0dTQUxNQUFBUUNBRU1ttQ1p0dU1GGUXhEUzhi</ds:SignatureVa
lue>
    <KeyInfo>
        <X509Data>
            <X509IssuerSerial>
                <X509IssuerName>CN=TestSignCert</X509IssuerName>
                <X509SerialNumber>75496503122422458150193540449068096025</X509SerialNumber>
            </X509IssuerSerial>
        </X509Data>
    </KeyInfo>
</ds:Signature>
</MessageEnvelope>
```

Note that senders must use the same certificate, as defined in the KeyInfo element of the XMLDSig, for all messages using web services. This Key will serve as a unique identifier for the sender, and will be used to describe configuration information (such as URIs) associated with the sender. Note that the Reference element's URI attribute will always be set to the value "#Body".

The following constraints shall apply when generating digital signatures:

- Data will be transmitted in accordance with section 6.6.4 of that document, "Envelope Transform". XML for encoding may be found here: http://www.w3.org/TR/2002/REC-xmldsig-core-20020212/xmldsig-core-schema.xsd#enveloped-signature

All web-based delivery mechanisms will support Signed Messages as defined above as a mechanism to sign and validate messages. Email-based delivery will not use XMLDSIG to sign messages.

All recipients of messages should be used as it applies to Disposition. Other values are allowed, and should be established by agreement between parties validate Signed Messages before processing them.

Note that all messages require the use of Canonical XML, Version 1.1 (With Comments), [XMLC1.1], which is necessary for proper signing.

- Note that when using W3C schemas it is best to copy schemas to a local directory. http://www.w3.org/Help/Webmaster.html#slowdtd‘Repurposed Avail’ — Indicates this Avail is a repurposing of another Avail.

- ‘Repurposed’ — Indicates this Avail is repurposed in a context other than an Avail. Description should be in Comments.

- ‘Delivery’ — Delivery instructions included in Comments